

“A Natural Gas Outlook and Consumer Programs and Assistance”

Arkansas Public Service Commission

September 21, 2004

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Oil Prices – Hitting all-time highs, but easing



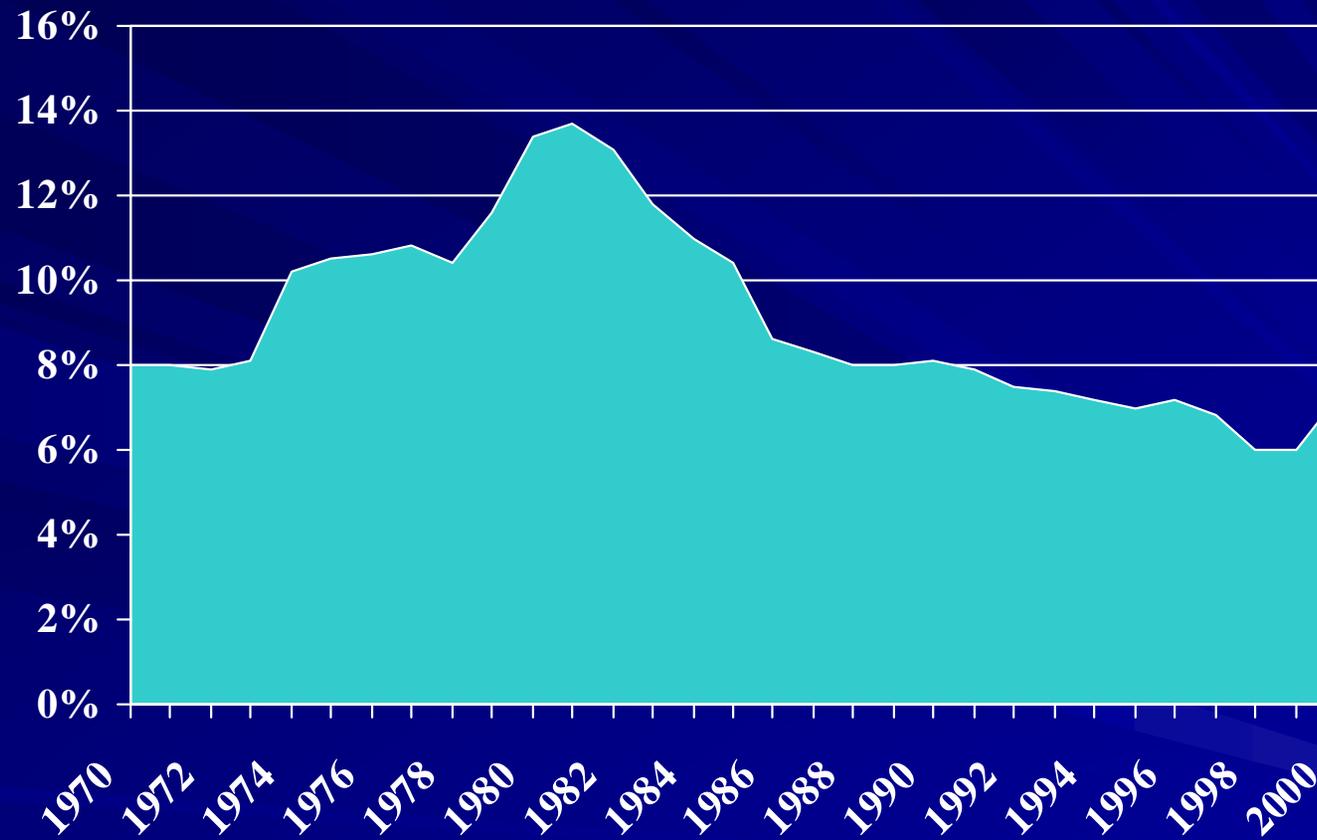
Source: Bloomberg

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What is driving high crude oil prices?

- Demand pull – particularly China
- Less spare production capacity
- Weak U.S. dollar
- Political uncertainty
 - Iraq
 - Russia – Yukos and recent terrorist attacks
 - Up until Aug. 15, referendum in Venezuela
- Speculators in market

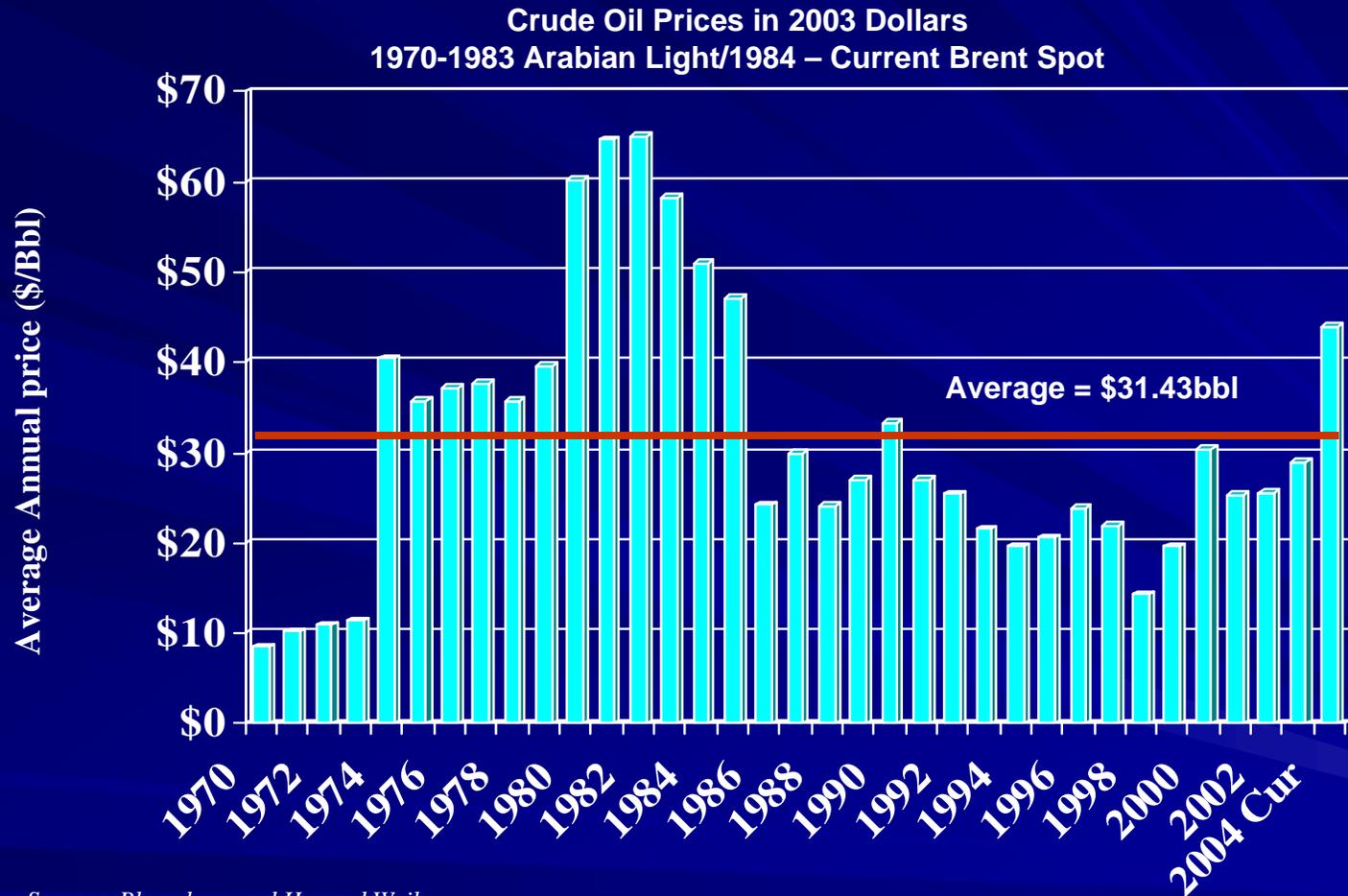
Energy expenditures as a % of GDP are declining



Source: EIA/DOE

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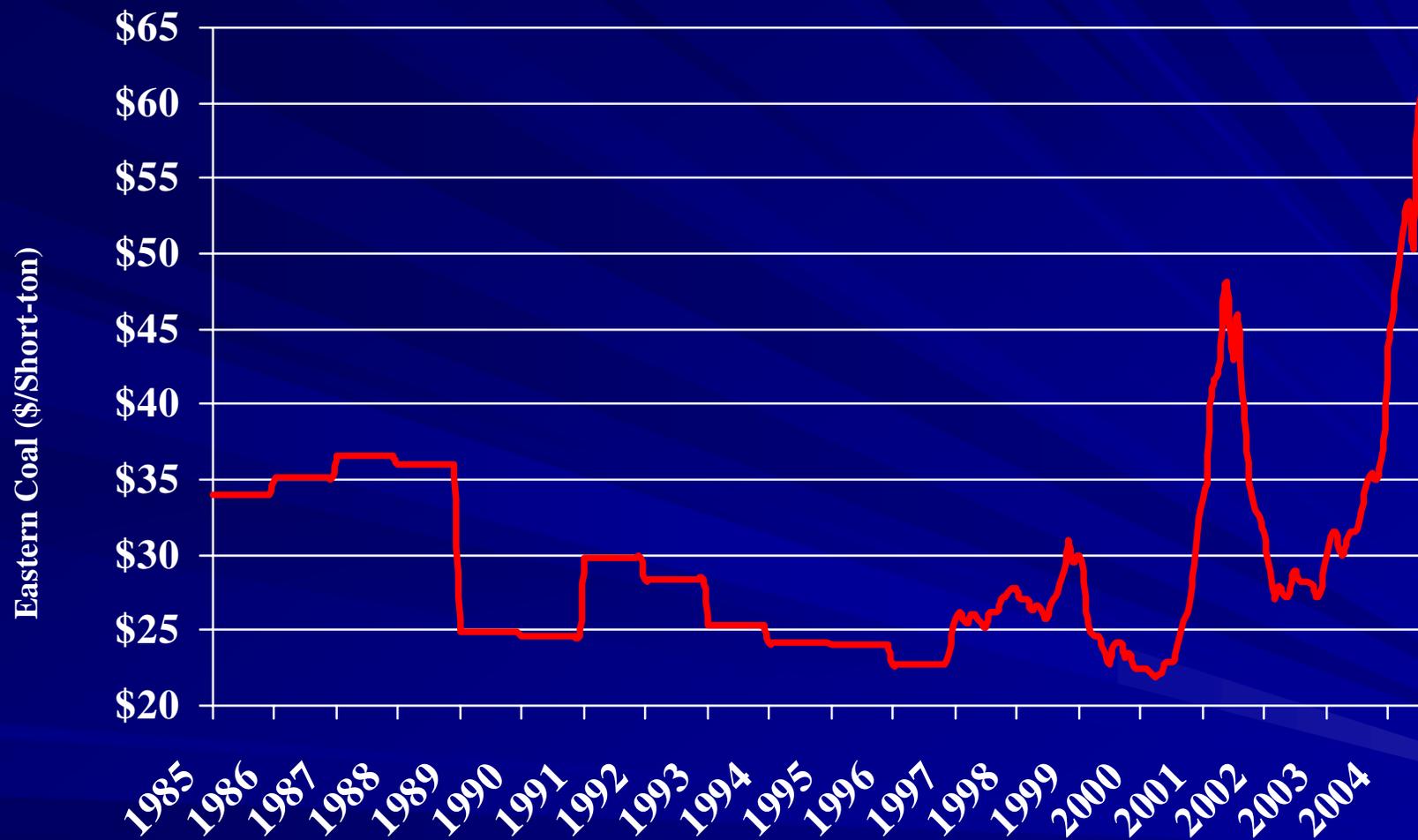
Inflation adjusted, crude is below highs of early 1980's



Source: Bloomberg and Howard Weil

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Coal prices at record highs



Source: Bloomberg

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Coal Demand Fundamentals

- **Tremendous consumption in China pulling worldwide prices**
 - China disincentivized coal exports in 2003
 - U.S. exports up 57% year-to-date
- **Change in ownership of domestic electric coal-fired generation**
 - capacity utilization up to 72% from 67% six years ago
- **Cost advantage of coal fleet relative to natural gas**
- **Stronger U.S. economy translates into higher steam and metallurgical coal demand**

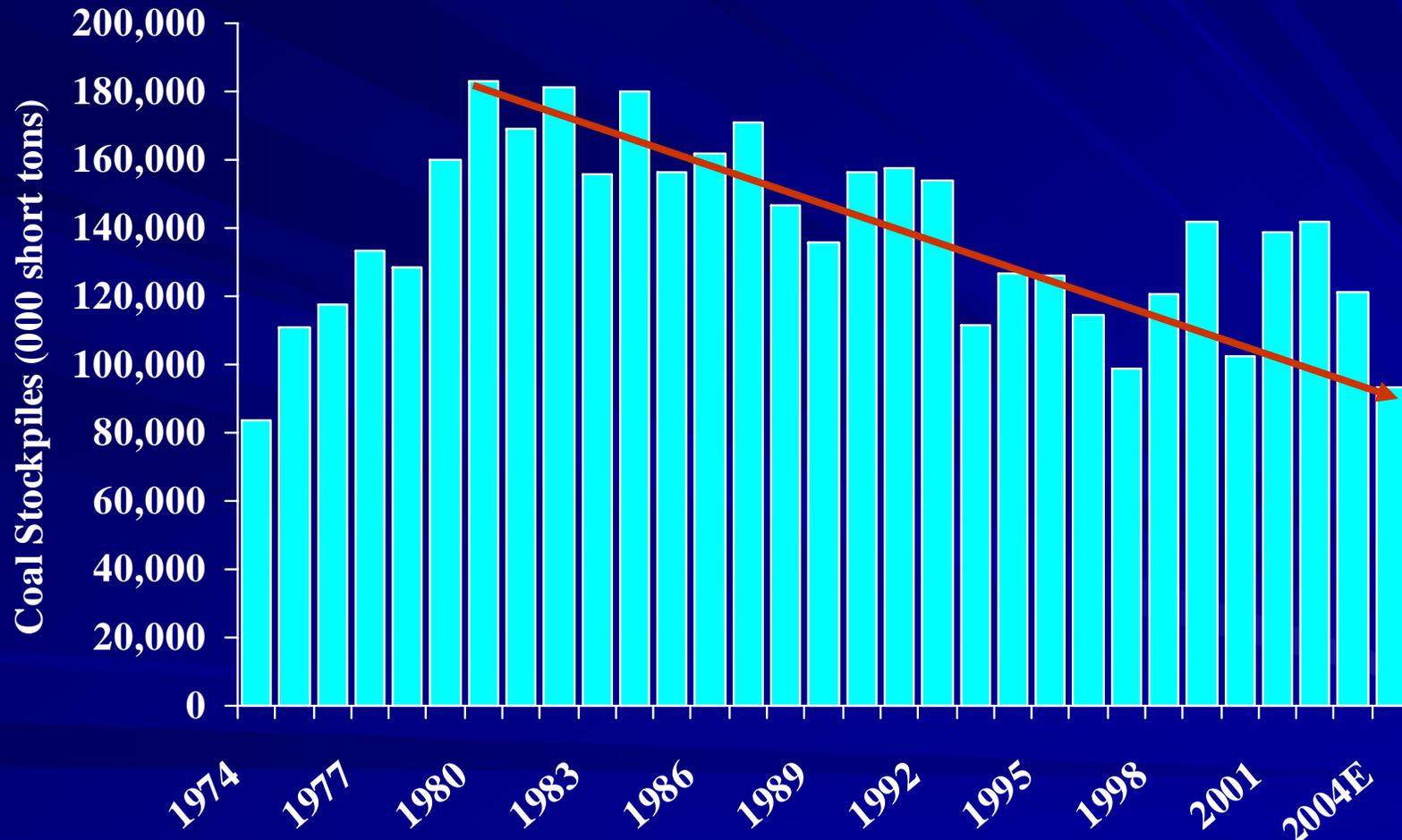
Coal Supply Fundamentals

- **Lack of capital deployed to develop new mines**
 - **3-5 year lag before “greenfield” mines can add substantial production**
- **Permitting constraints delay future production growth**
- **Railroad constraints impeding deliverability, predominantly from Powder River Basin (western US)**
 - **Only region with excess production capacity**
- **More reserves in hands of publicly traded companies**
 - **Companies maintaining capital discipline**
 - **Private equity buying companies out of bankruptcy**

Coal Supply Fundamentals (cont.)

- **Absence of surety bond market squeezing out smaller producers**
- **Rising mining costs**
 - **Low hanging fruit has been picked**
- **Inventories now 20% below 3-year average**

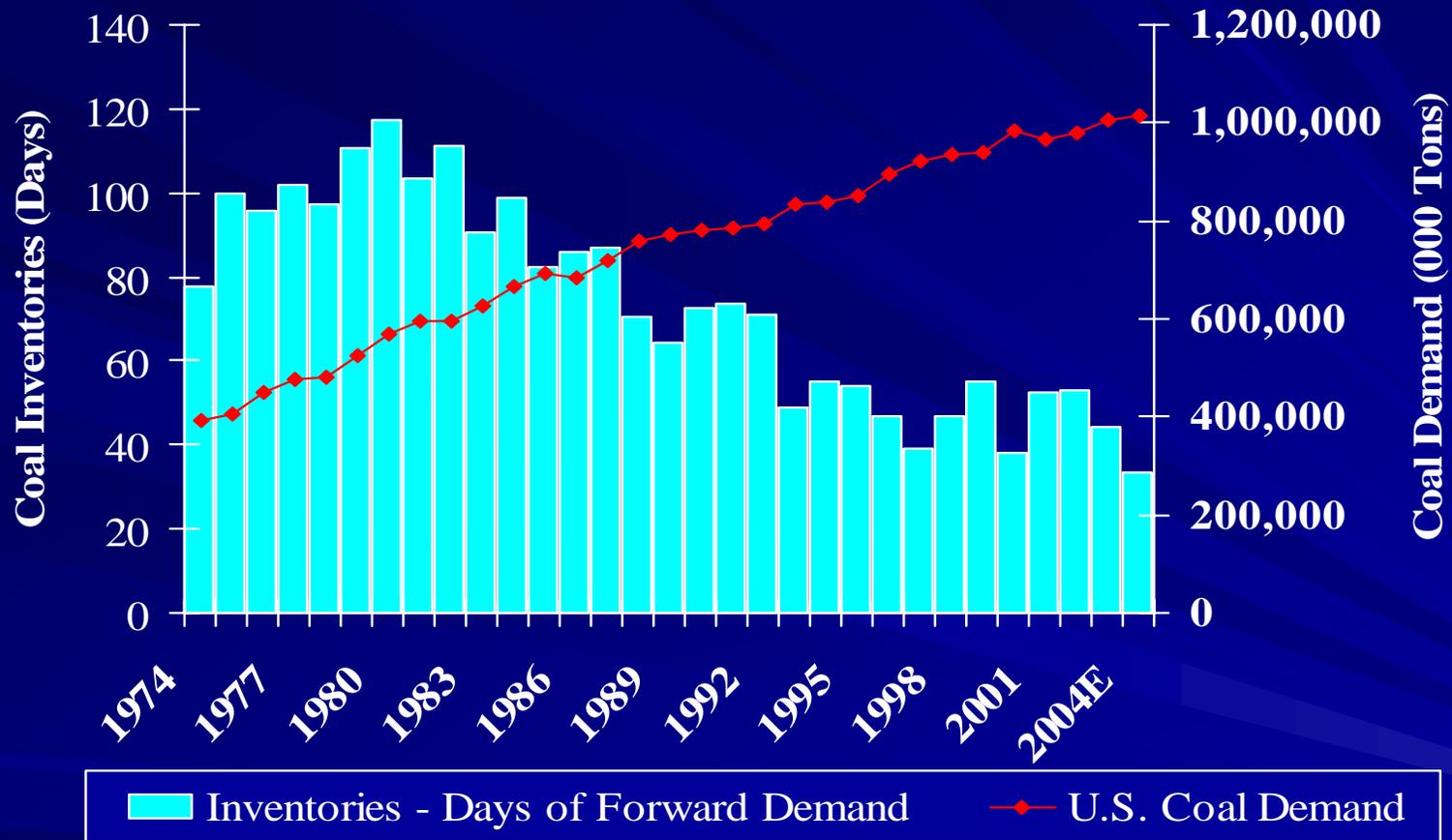
Coal stockpiles heading toward 30-year lows



Source: EIA, Bloomberg, Howard Weil

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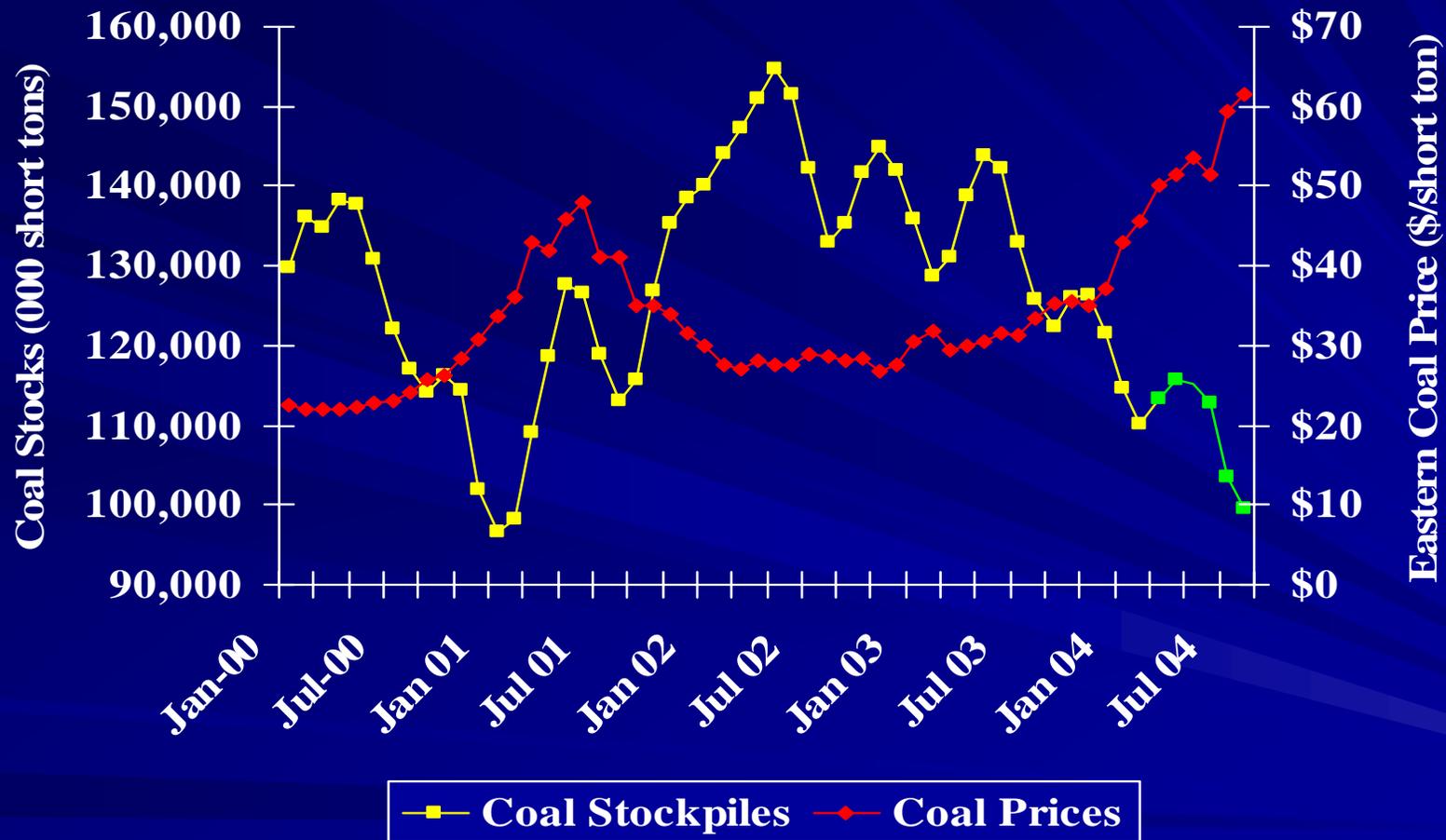
As coal demand has risen, inventories continue to decline



Source: EIA, Bloomberg, Howard Weil

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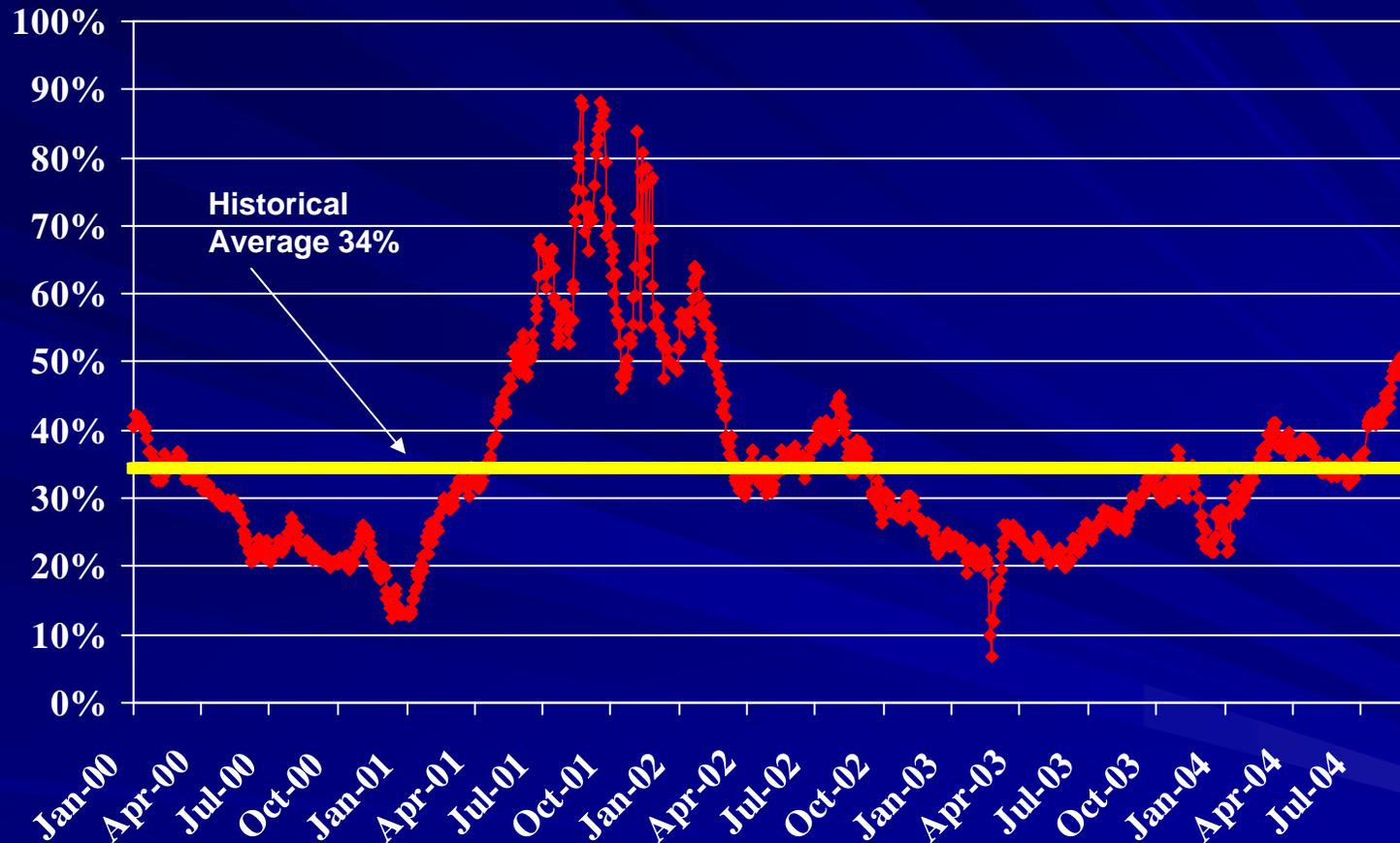
Declining Inventories = Rising Prices



Source: EIA, Bloomberg, Howard Weil

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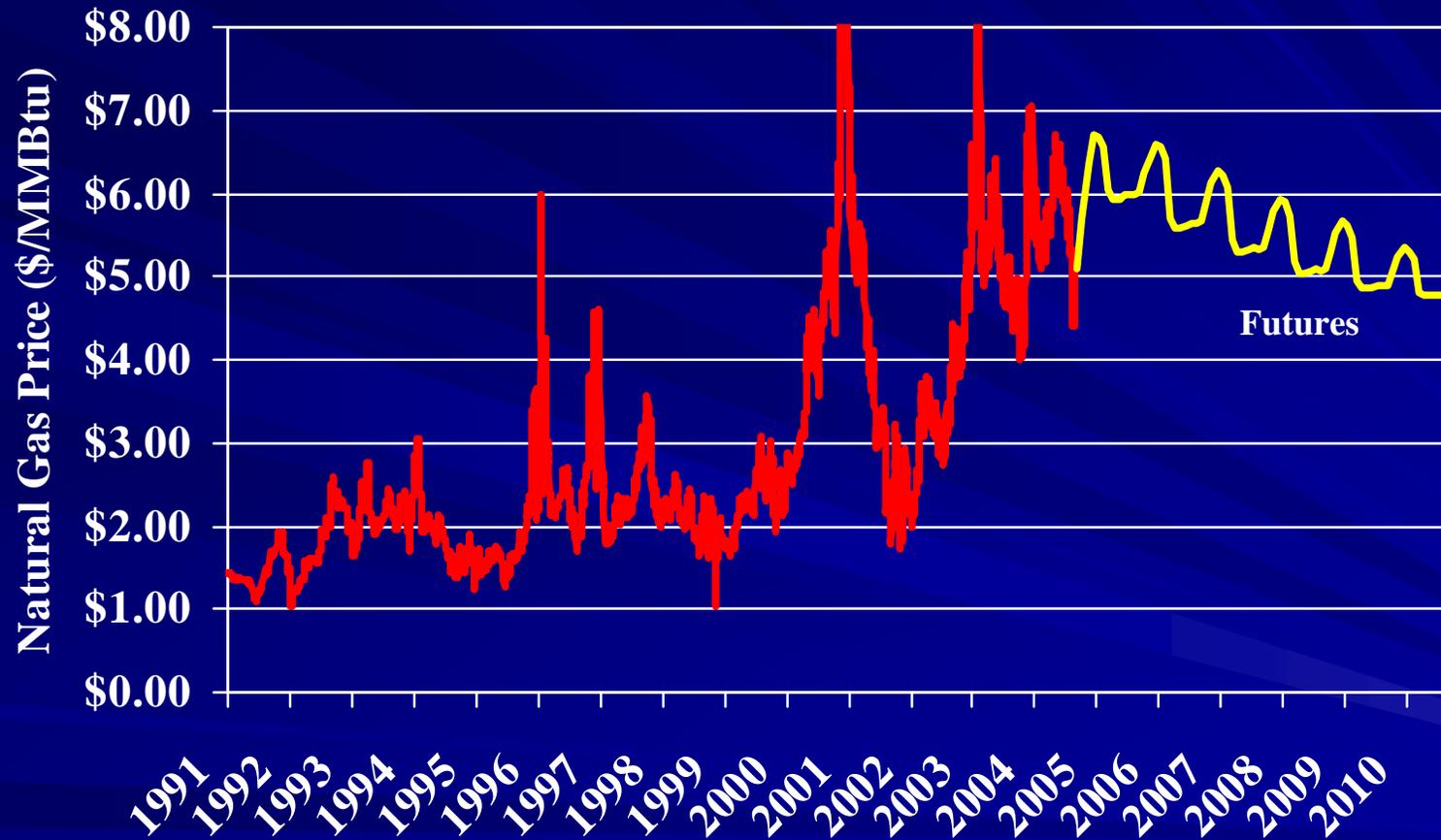
Coal still trading at 50% discount to natural gas



Source: EIA, Bloomberg, Howard Weil

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Natural gas prices... more than a spike

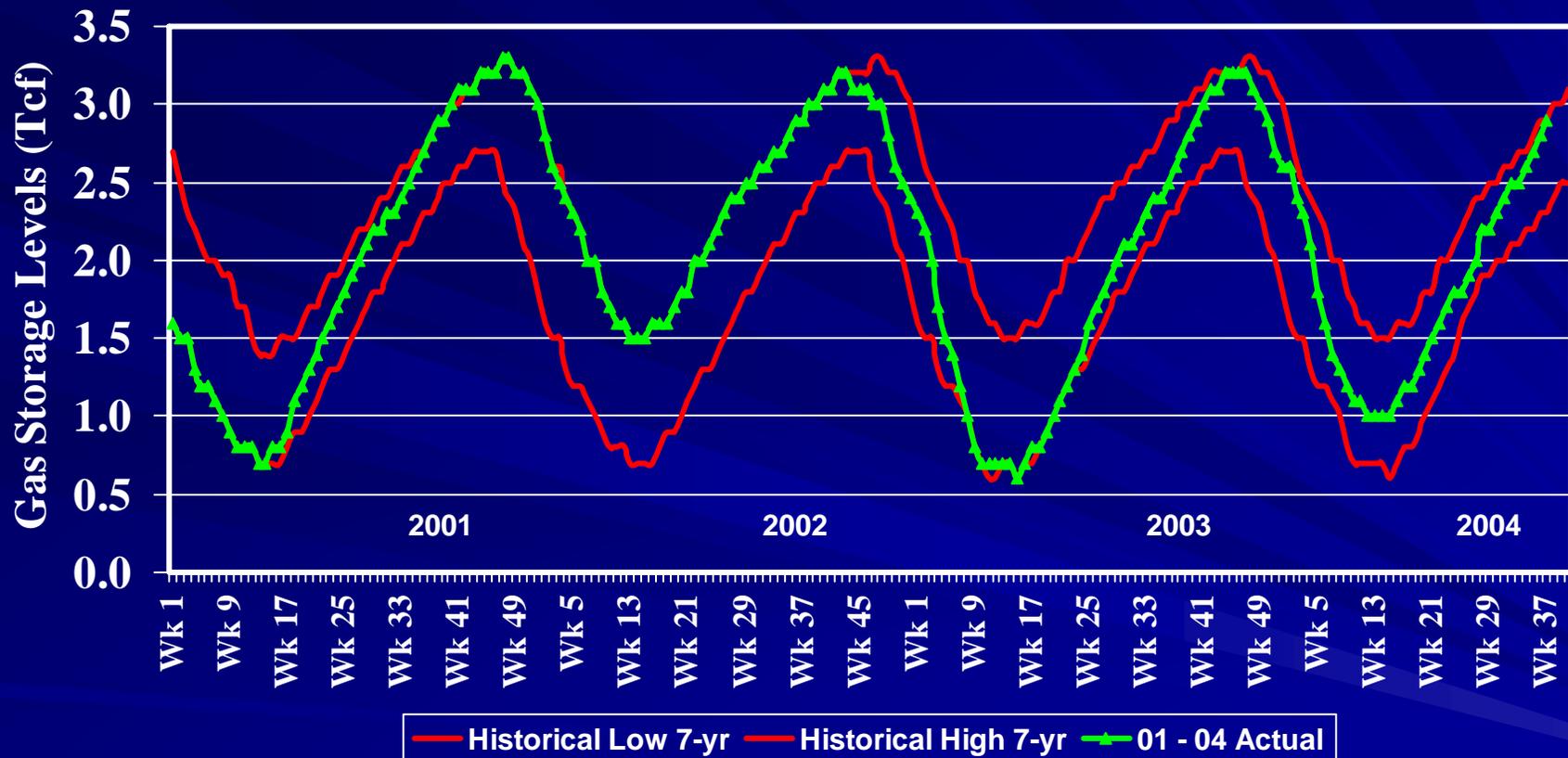


Source: Bloomberg

— Spot Gas — Futures

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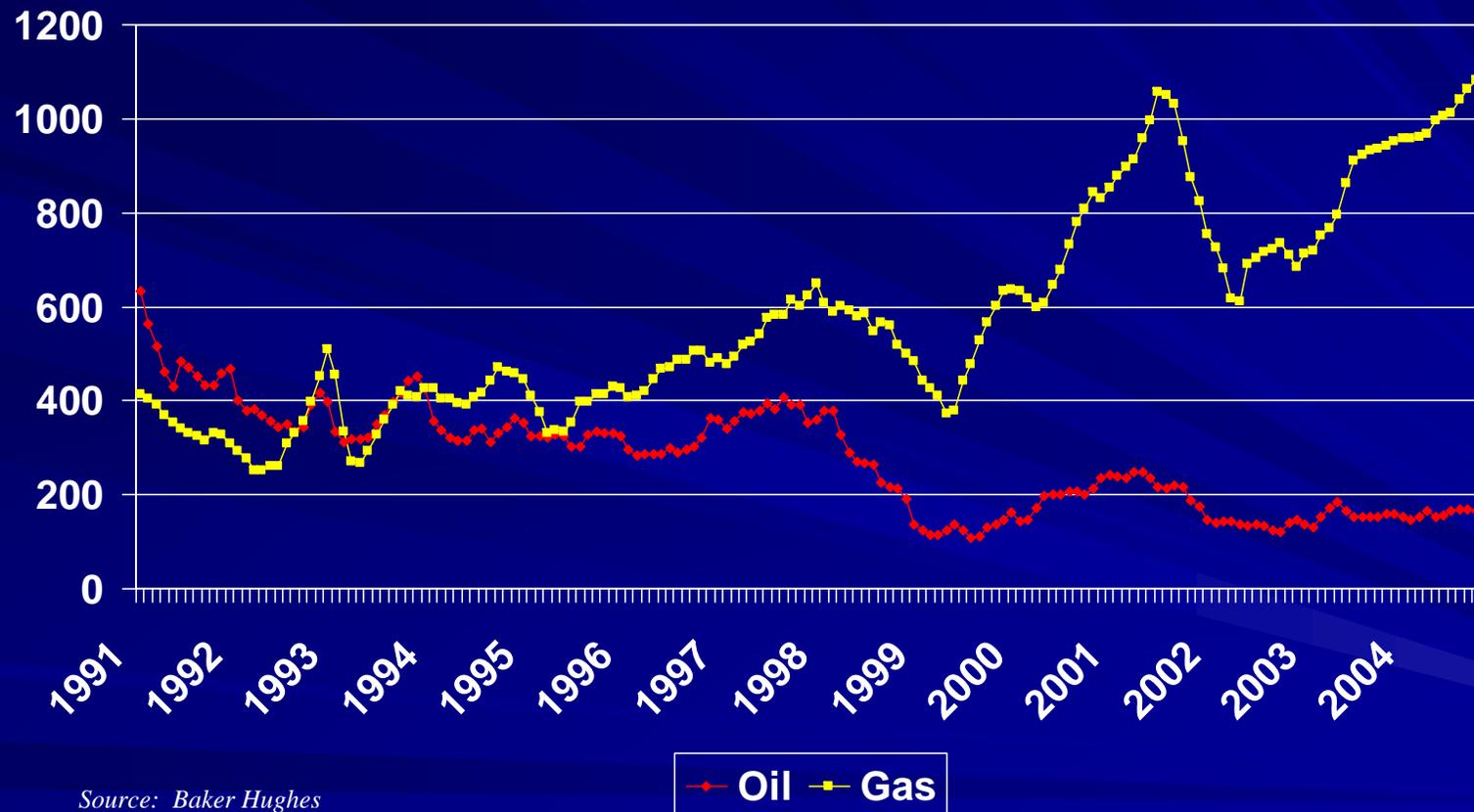
Gas storage near full...not the problem



Source: EIA/DOE

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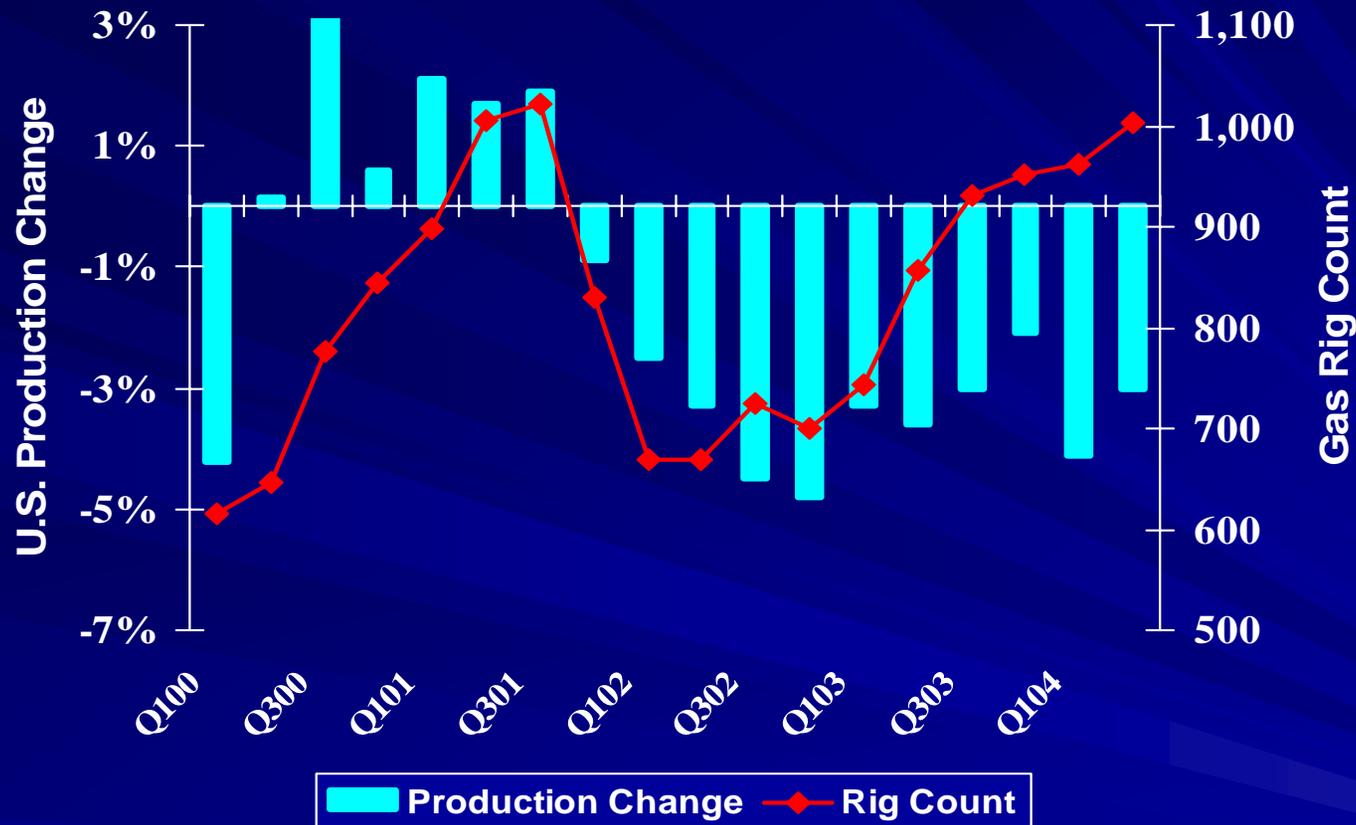
Natural gas rig count is at all time highs



Source: Baker Hughes

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Despite increased drilling, production not responding



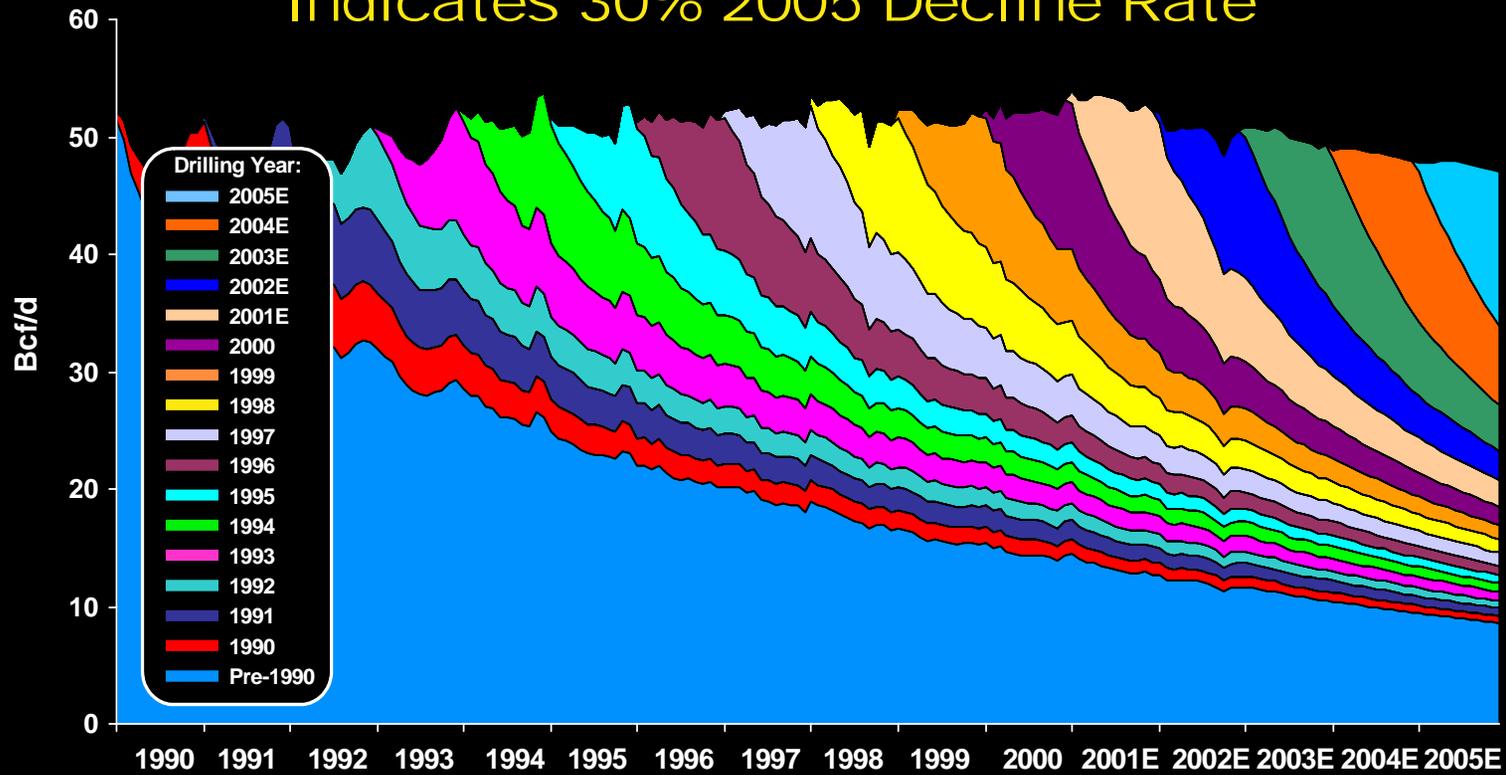
	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004E</u>
Annual Production Change	-1.2%	0.6%	-4.7%	-4.8%	-2.5%
Avg. Gas Rig Count	720	939	691	872	1,031

Source: Baker Hughes and Howard Weil

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U.S. Natural Gas Production History

Indicates 30% 2005 Decline Rate



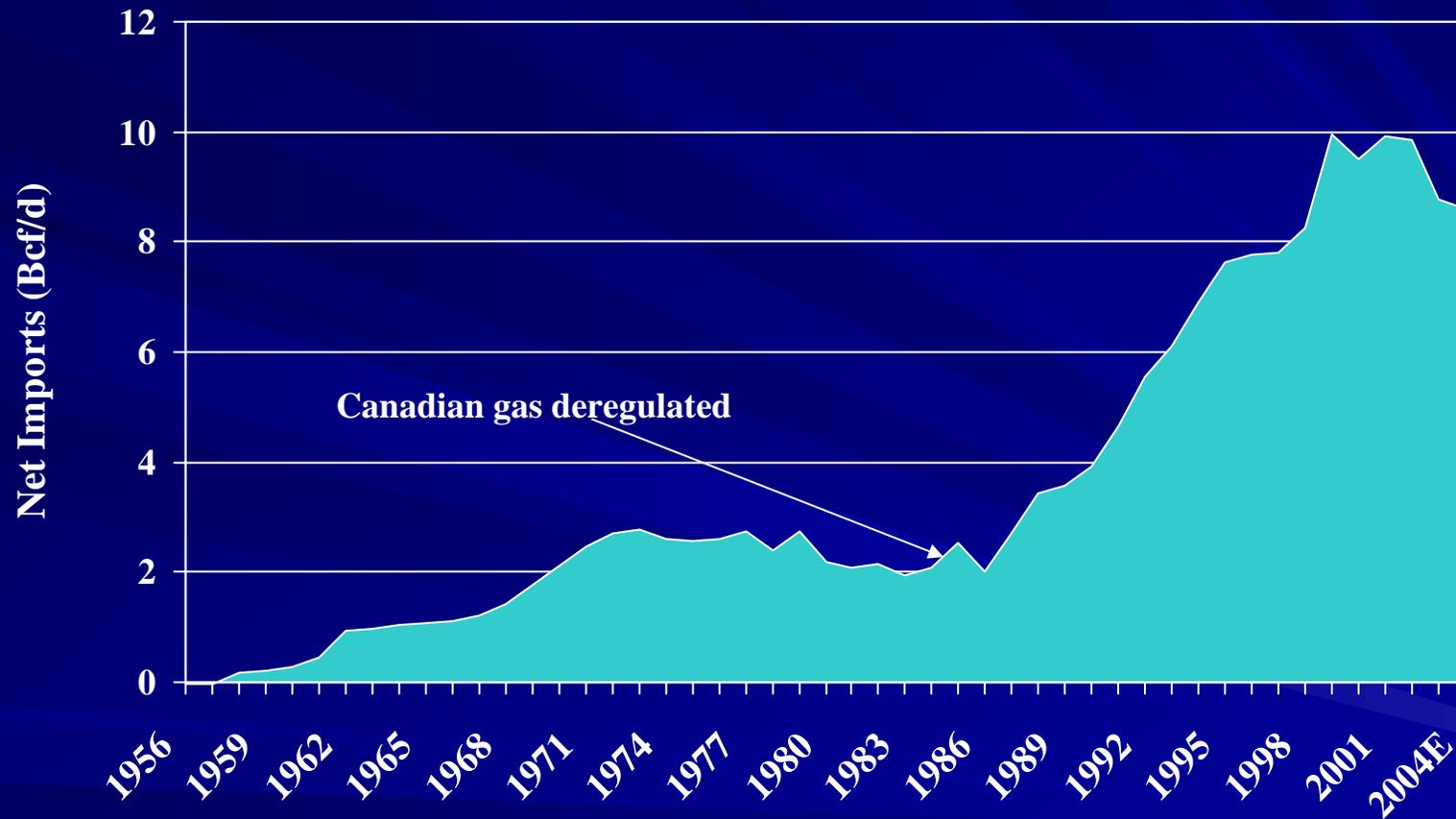
Production Decline Rate of Base:

17% 17% 16% 18% 19% 19% 20% 21% 23% 23% 25% 24% 27% 28% 29% 30%

Utilizes Data Supplied by IHS Energy; Copyright 1990-2004 IHS Energy
 Chart Prepared by and Property of EOG Resources, Inc.; Copyright 2002-2004



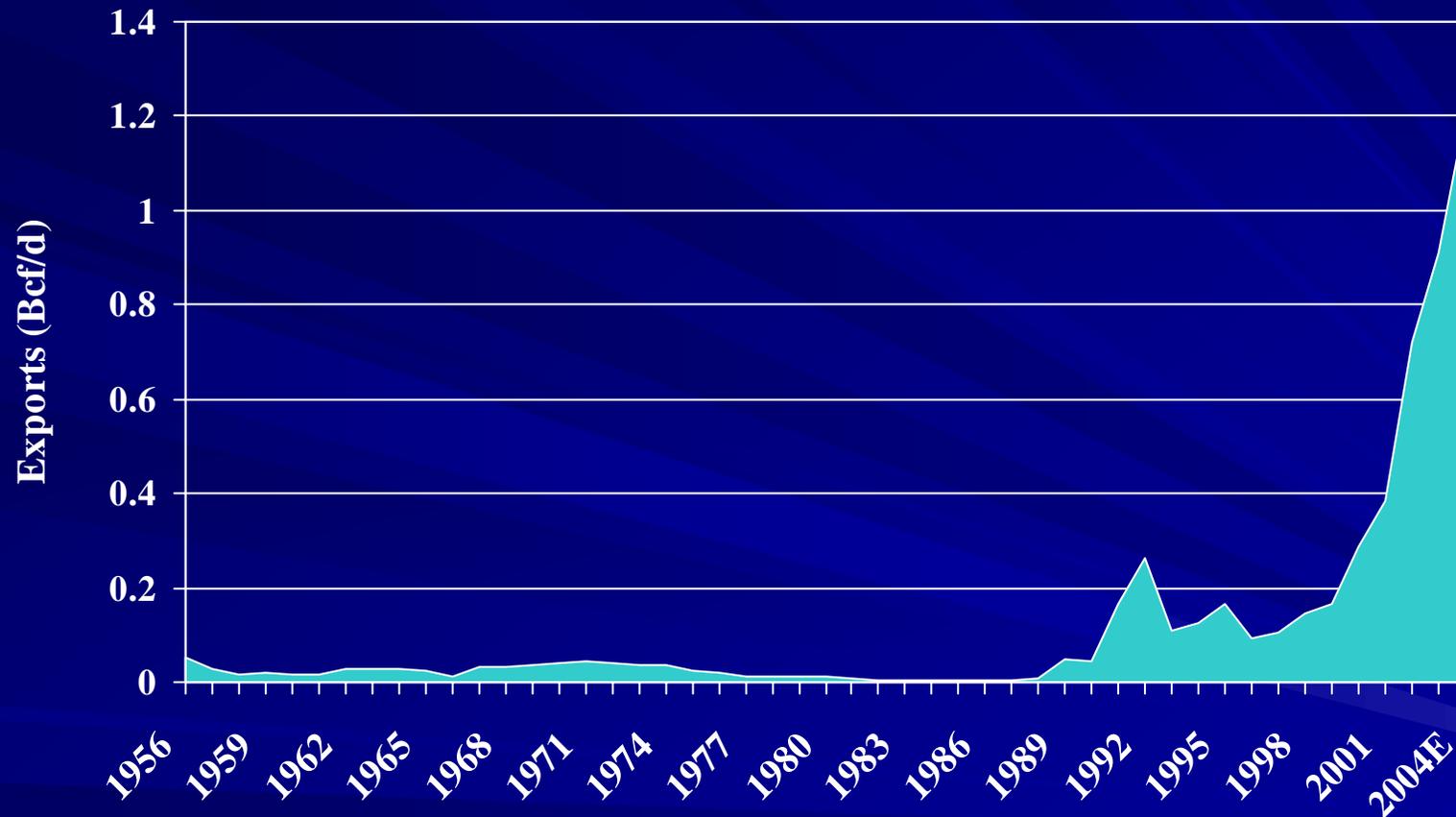
Trend toward declining Canadian exports



Source: EIA/DOE

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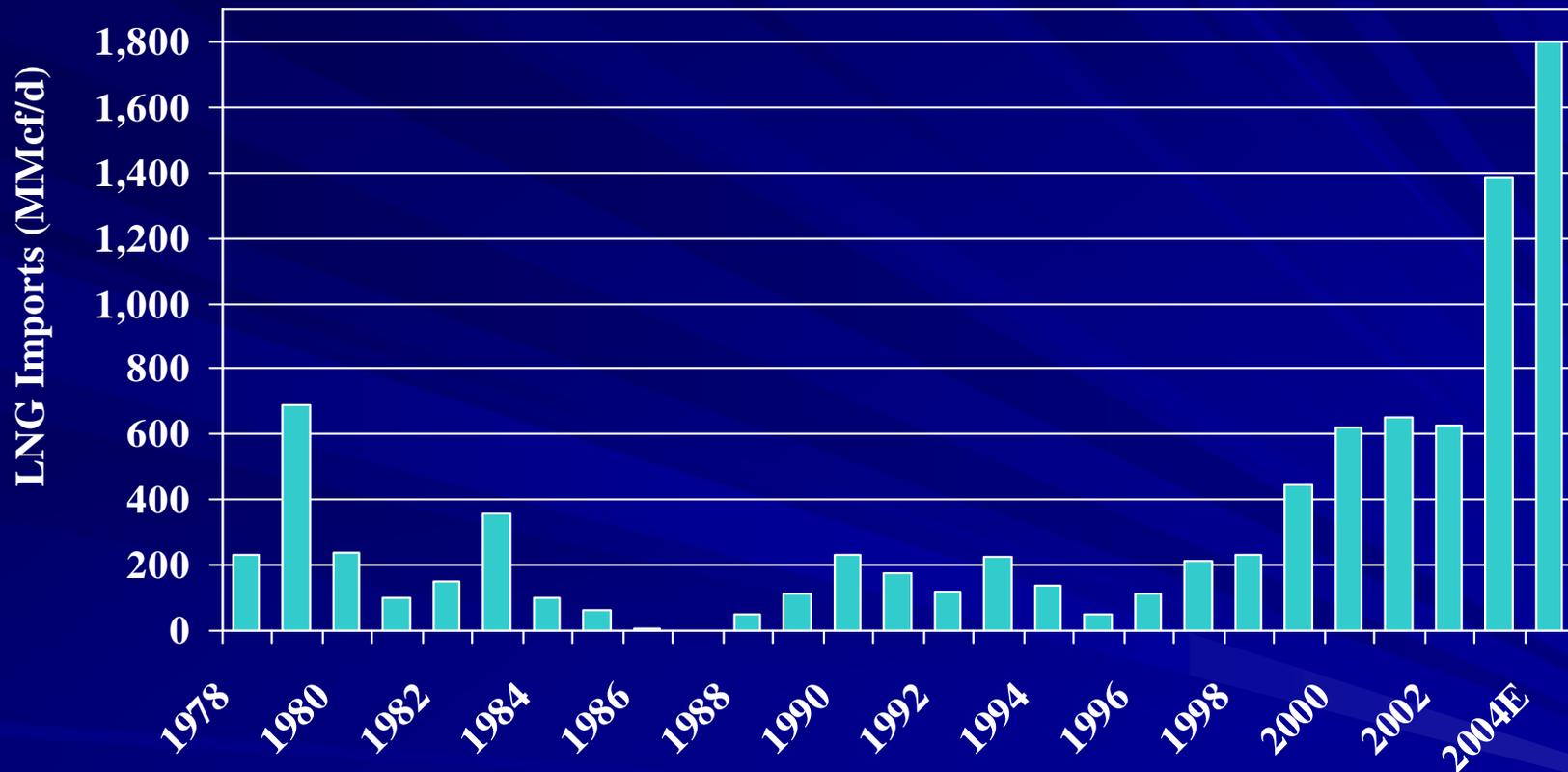
Rising exports to Mexico a negative



Source: EIA/DOE and Howard Weil

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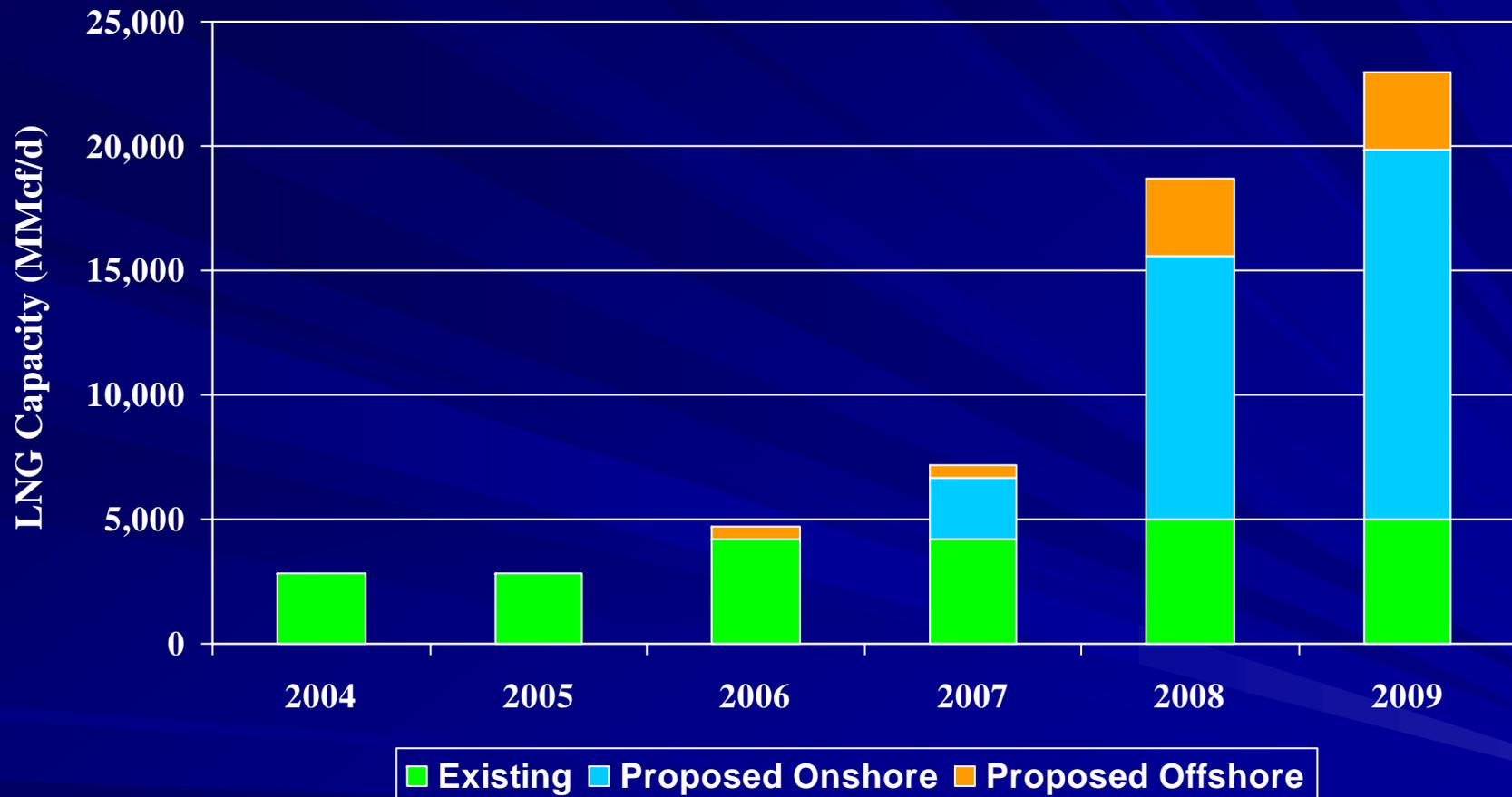
LNG imports are helping with the problem...



Source: EIA/DOE and Howard Weil

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...but the impact is longer term and there are ramifications



Source: EIA/DOE, FERC and Howard Weil

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Fundamentals point to continued strength in gas prices

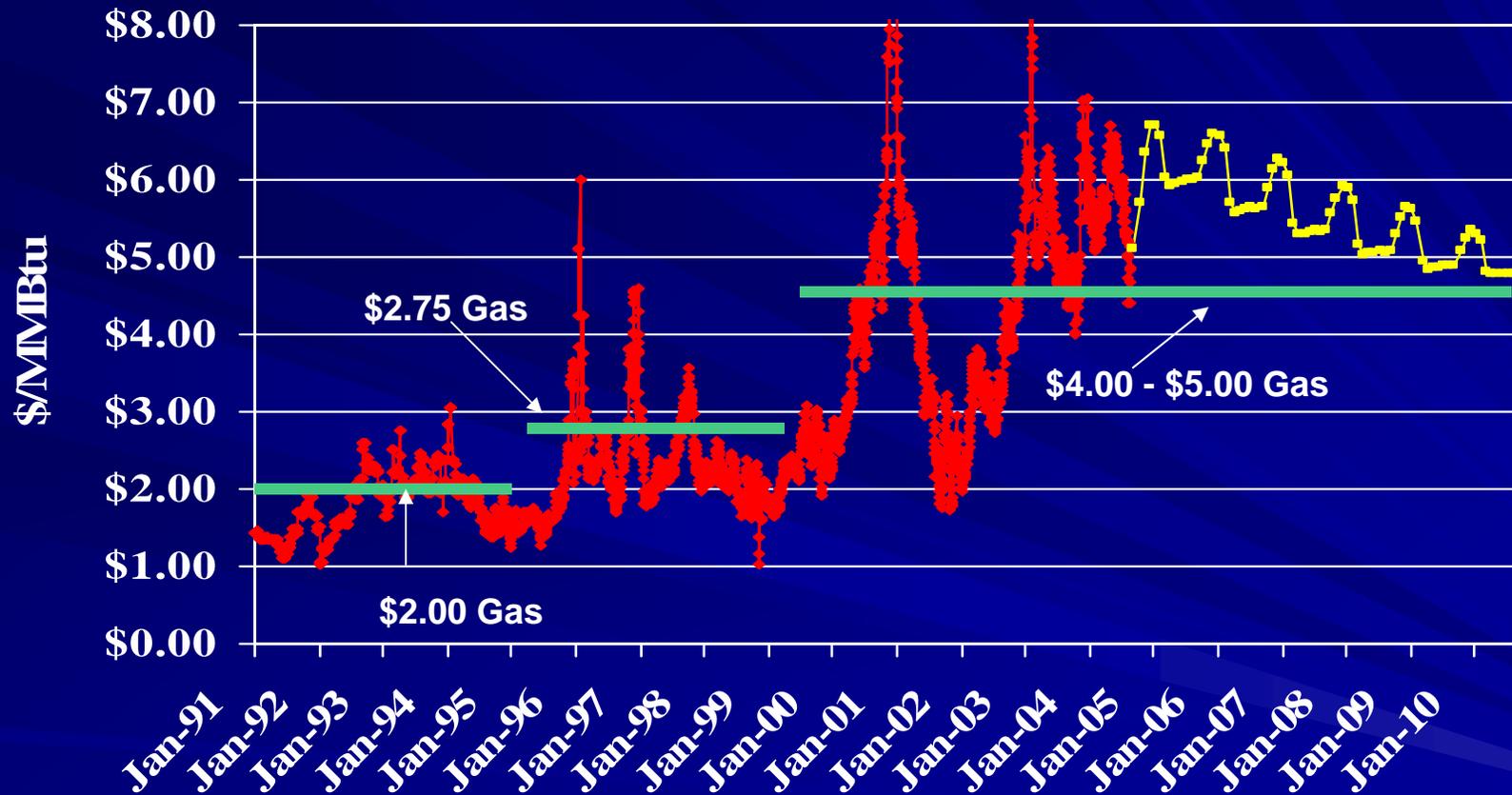
Natural Gas Supply/Demand Balance

	Bcf/d		
<u>Supply</u>	<u>2002</u>	<u>2003</u>	<u>2004E</u>
Canada	9.8	8.8	8.6
Mexico	(0.7)	(0.9)	(1.2)
LNG	<u>0.6</u>	<u>1.4</u>	<u>1.8</u>
Sub	9.7	9.2	9.2
Production	52.1	51.4	51.0
Storage	<u>1.3</u>	<u>(0.5)</u>	<u>0.0</u>
Total Supply	63.1	60.1	60.2
<u>Demand</u>			
Electric	15.5	13.5	14.1
Industrial	20.1	19.2	19.5
Res/Comm	21.9	22.6	22.0
Other	<u>5.5</u>	<u>4.8</u>	<u>4.8</u>
Total Demand	63.1	60.1	60.4
Balance	0.0	(0.0)	(0.2)

Source: EIA/DOE and Howard Weil

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A step-change to higher gas prices



Source: Bloomberg and Howard Weil

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Sampling of Regional Electricity prices (\$/MWhr)

	<u>1Q'04</u>	<u>1Q'03</u>	<u>Change</u>
California	\$44.31	\$50.69	-12.6%
Cinergy	\$42.05	\$50.96	-17.5%
Texas	\$40.46	\$53.65	-24.6%
New England	\$69.41	\$76.05	-8.7%

	<u>2Q'04</u>	<u>2Q'03</u>	<u>Change</u>
California	\$48.77	\$38.75	25.9%
Cinergy	\$45.09	\$32.88	37.1%
Texas	\$49.24	\$51.09	-3.6%
New England	\$61.40	\$54.96	11.7%

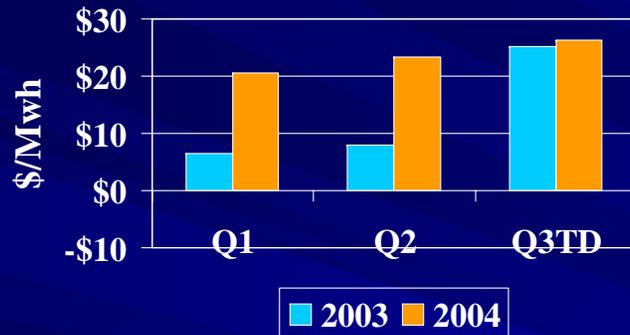
	<u>3Q'04TD</u>	<u>3Q'03TD</u>	<u>Change</u>
California	\$53.50	\$48.42	10.5%
Cinergy	\$45.16	\$43.32	4.2%
Texas	\$51.93	\$45.85	13.3%
New England	\$57.21	\$54.16	5.6%

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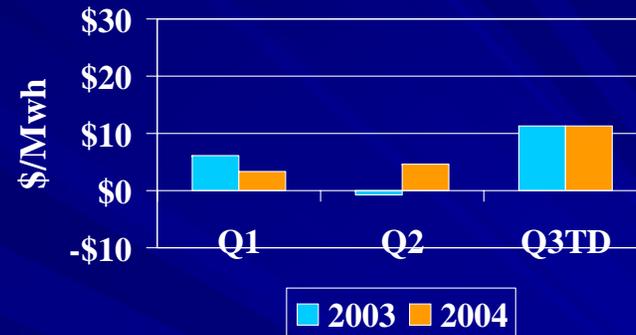
Source: Megawatt Daily

Sampling of regional spark spreads (\$/MWhr)

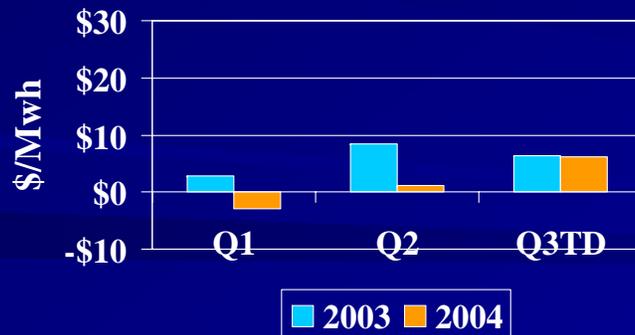
New York



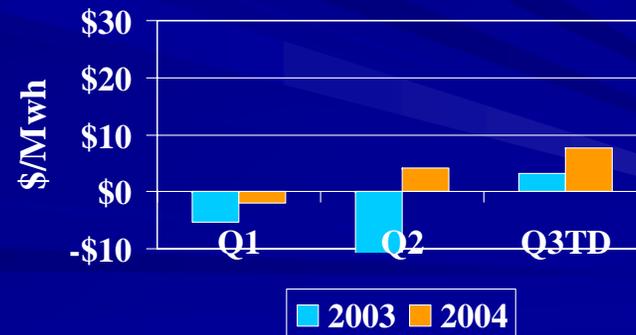
COB



ERCOT



SERC



Source: Megawatt Daily

Solutions to the Energy Dilemma

- **Conservation**
- **Fuel diversity**
- **Spending on electric transmission grid**
- **Alternative energy**
- **Alaskan Pipeline**
- **Energy bill**

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